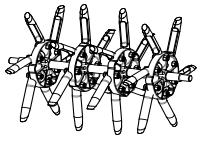
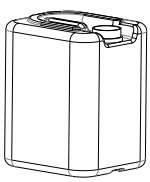
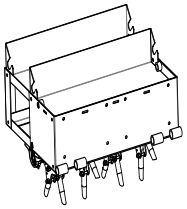
AET48 Owner's Manual

TOW AERATOR Owner's Manual

AET48

Replacement Parts

Tine Row Kit	Tine Kit	Water Jug	72" Conversion Kit
Complete tine row set for replacement of one complete row of tines. Includes mounting plates, spacer, and all hardware. 	Individual coring tine for replacement of worn or broken tines.	Provides weigh for the machine to allow for deeper ground penetration. 	Allows the unit to be expanded to 72". 
P/N 361279	**P/N 360100**	**P/N 361100**	**P/N 361273**

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SPECIFICATIONS

TOW AE

Total Unit Weight:	244# (109.8 Kg)

INSTRUCTION LABELS

The labels shown below were installed on your BILLY GOAT® Aerator. If any labels are damaged or missing, replace them before operating this equipment. Part numbers from the Illustrated Parts List are provided for convenience in ordering replacement labels. The correct position for each label may be determined by referring to the part numbers shown.

LABEL WARNING GUARDS
P/N 900327

PACKING CHECKLIST

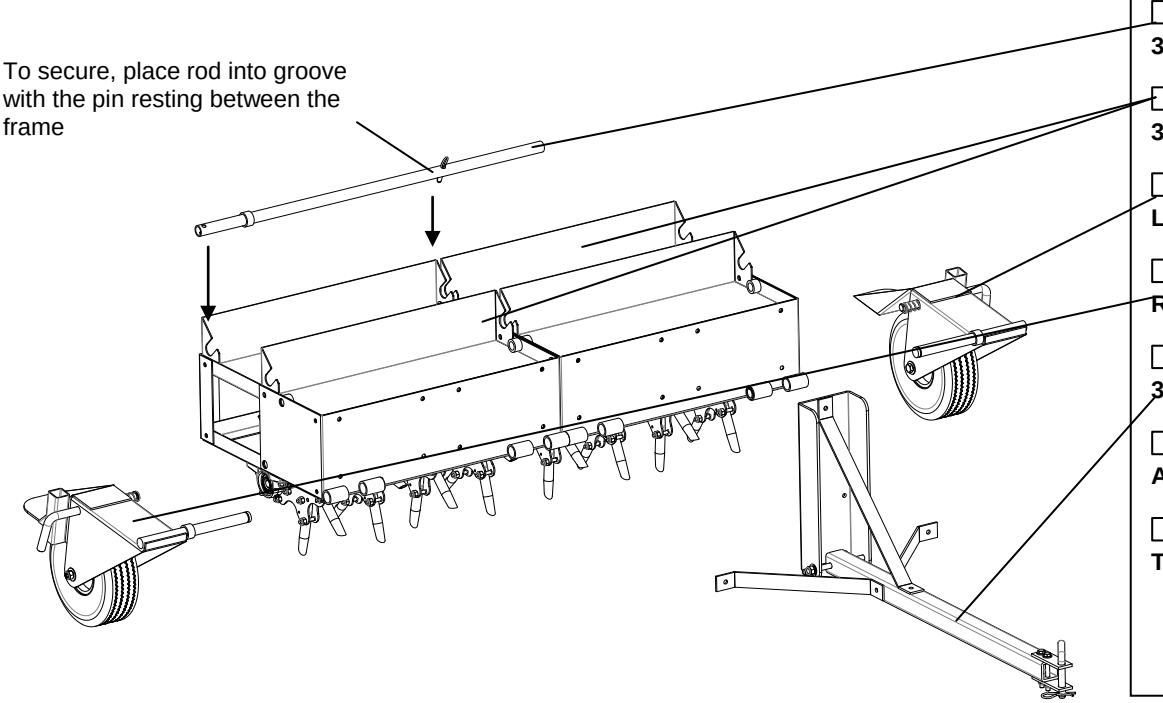
Your Billy Goat is shipped from the factory in one carton.

READ all safety instructions before assembling unit.
TAKE CAUTION when removing the unit from the box.

PARTS BAG & LITERATURE ASSY

Warranty card P/N- 400972, Owner's Manual P/N-361277, Loose Parts Bag P/N-361148, General Safety and Warnings Manual P/N-100295

To secure, place rod into groove with the pin resting between the frame



Boxing Parts Checklist

- ☐ **Lift Bar Tow AE - 361152**
- ☐ **Tow AE Frame - 361130-S**
- ☐ **Wheel Assembly Left - 361111-S**
- ☐ **Wheel Assembly Right - 361112-S**
- ☐ **Hitch Assembly- 361114**
- ☐ **Loose Parts Assembly - 361148**
- ☐ **Owner's Manual Tow AE 361149**

ASSEMBLY

NOTE: Items in ( ) can be referenced in the Parts Illustration and Parts List on pages 7-8.

1. Assemble the machine.

2. First attach the two frames together (item 1) with the hardware (items 31, 32, and 35).

3. Grease the shafts on the wheel assemblies. Then attach the wheel assemblies to the frame by sliding them in the collars on the front side of the frame. Then secure them in place with the snap rings (item 22).

4. Attach the hitch assembly and braces (items 9 and 10) to the frame with the hardware (items 31, 32, 33, 34, 35, and 36).

5. Attach the machine to a suitable hitch using the pin (item 15) and hitch pin (item 16).

6. Place water tanks or weights in the designated positions the unit and secure them with a strap. **DO NOT** overload this machine with weights.

7. Secure the lift rod before aerating.

OPERATION

⚠Like all mechanical tools, reasonable care must be used when operating machine. **Inspect machine work area and machine before operating. Make sure that all operators of this equipment are trained in general machine use and safety.**

DO NOT operate if excessive vibration occurs. If excessive vibration occurs, stop immediately and check for damaged or worn tine reel, loose set screws, or lodged foreign objects. (See trouble shooting section on page 6).

AERATING OPERTATION

NOTE: NEVER PARK THIS UNIT ON A SLOPE OF ANY KIND. Always keep tines in the up position when parking the unit.

TINES RAISING/LOWERING: Place your foot on the wheel guard or insert the lift rod into the square slot and apply pressure, then pull the pin outward. This will allow the wheel to move up or down. Repeat this operation on the opposite side. DO NOT operate with one wheel up and the other down, this can damage the unit.

ENGAGE TINES: With the aerator in the work area, raise both wheels to their upward locked position; this will lower the tines into the dirt. (see *Fig. 1*)

TINE PENETRATION: Maximum tine penetration is achieved by the amount of weight that is being used.

TURNING: Avoid sharp turns or high speed turns as this may result in damage to the machine.

TRANSPORT: Be sure to lift the tines out of the ground before transporting away from the work area. (see *Fig. 2*)

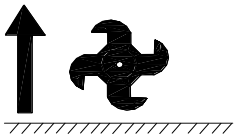


Fig. 1

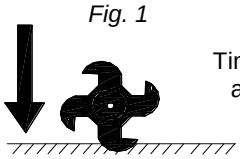


Fig. 2

*****TIPS*****

MOW
Mow the lawn to its normal cut height.

WATER
For the best performance and maximum tine penetration the lawn should be thoroughly watered the day before aeration.

INSPECT
Check the lawn before beginning work. Remove all rocks, wire, string, or other objects that can present a hazard during work prior to starting.

IDENTIFY
Mark all fixed objects to be avoided during work, such as sprinkler heads, water valves, buried cables, or clothes line anchors, etc.

SLOPES: Do not aerate on steep slopes. Use extreme caution when operating on any sloped surface. For lesser sloped areas operate the unit, traversing up and down at a 45 degree angle to the slope rather than straight across.

MAINTENANCE

PERIODIC MAINTENANCE

Periodic maintenance should be performed at the following intervals:

Maintenance Operation	Every Use (daily)	Every 25 hrs	Every 50 Hrs
Inspect for loose, worn or damaged parts.		●	
Thoroughly clean all debris from unit and tine reel	●		
Check tine reel nut torque. Torque to min. 100 ft.lbs.			●
Grease bearings (see lubrication).			●

Maintenance Continued next page.

TINE REEL REMOVAL AND TINE ROW REPLACEMENT (see parts illustration and Parts List on page 7-8)

TINE REEL REMOVAL

NOTE: Tine reel removal is only necessary to replace an entire tine row or for other major unit maintenance. Individual tines can be replaced by following the INDIVIDUAL TINE REPLACEMENT instructions.

1. With the tines in a raised position, secure the unit by chocking the wheels.

2. Remove the four bolts and nuts, two on each side, holding the tine reel bearings in place. BE CAREFUL the tine reel is heavy and sharp. Take precautions to not allow it to fall when the bearing bolts are removed.

3. Lift the reel up and to the side to remove it from the drive chain.

4. See TINE ROW REPLACEMENT for instructions on maintenance.

5. To reinstall the reel follow the above steps in reverse.

TINE ROW REPLACEMENT

1. Remove the tine reel per the TINE REEL REMOVAL instructions.

2. Remove the cotter pin and nut at the end of the tine reel shaft that secures the tine rows in place.

3. Remove the tine rows and spacers as necessary to replace the defective part. Be sure to note the order in which the spacers were removed for later reassembly.

4. Reassemble the tine reel in the exact order that it was disassembled.

5. Tighten the nut that secures the tine rows and spacers on the shaft. Torque the nut to a minimum of 100 ft.lbs. Check that all of the tine rows are tight by attempting to move them by hand.

6. Reinstall the tine reel per the TINE REEL REMOVAL instructions above. *NOTE*: Spraying tines with a rust preventing lubricant can increase tine life and allow for easier replacement of worn or damaged tines.

INDIVIDUAL TINE REPLACEMENT

1. With the tines in a raised position, secure the unit by chocking the wheels.

2. Loosen but do not remove the outermost nut and carriage bolt that secure the damaged or worn tine.

3. Loosen and remove the innermost nut and carriage bolt that hold the tine in the reel.

4. Use a small pry bar and push the tine plates apart slightly to slide out the tine to be replaced.

5. Slide the new tine in place and secure with the innermost nut and carriage bolt. Tighten completely.

6. Retighten the outermost nut and carriage bolt to completely secure the new tine.

7. Repeat as required to replace all damaged or worn tines.

NOTE: Tines are a normal wear item and should be inspected regularly for signs of wear or damage.

BEARING LUBRICATION

1. With the tines in a raised position, secure the unit by chocking the wheels.

2. Lubricate all the bearings using a pressurized grease gun with standard lithium based grease.

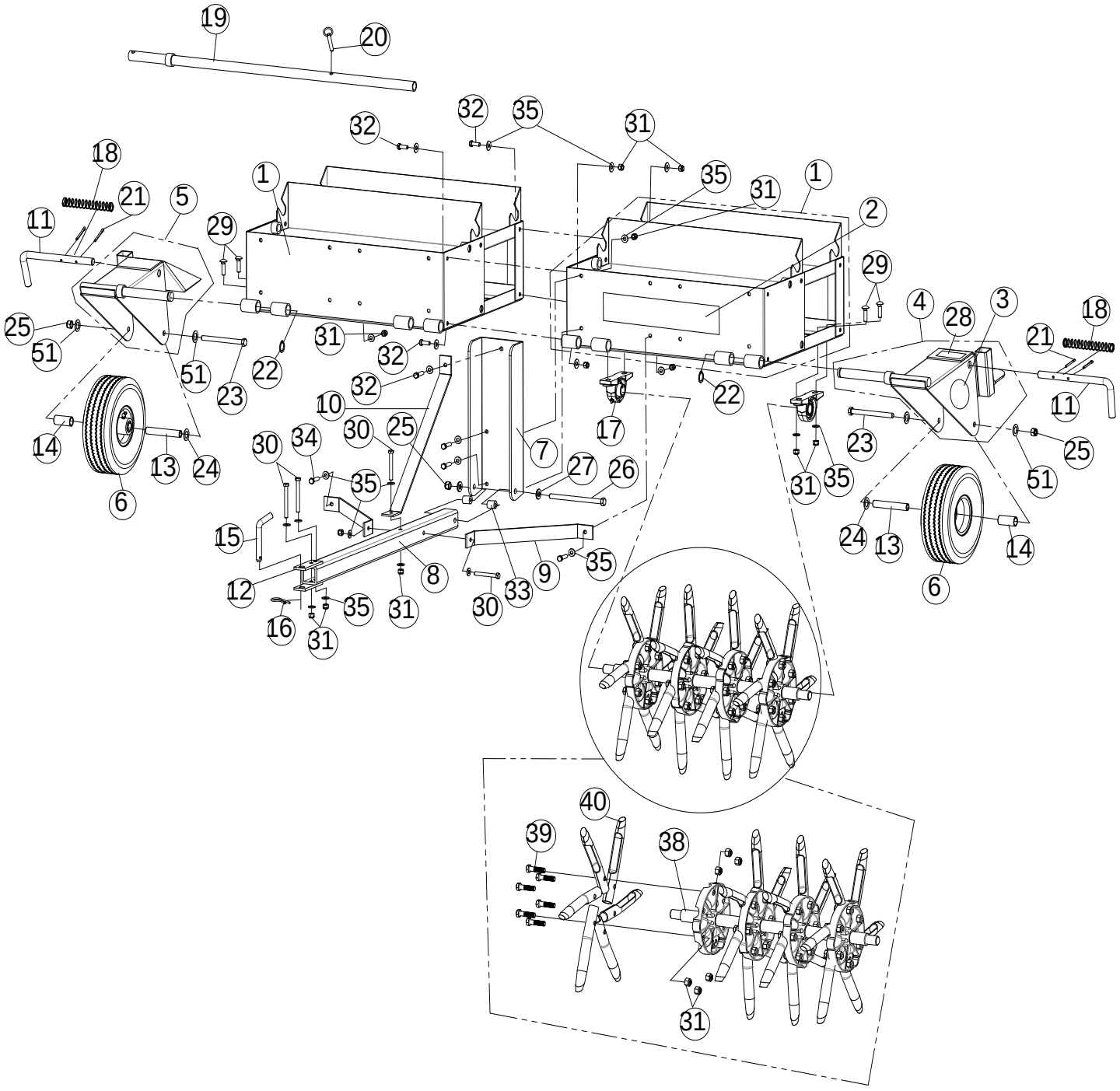
3. Wipe any excess grease off of all bearings and fittings after each lubrication.

NOTE: If machine is cleaned with a pressure washer, the bearings should be lubricated after each cleaning.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Abnormal vibration	Damaged or missing tines. Loose nuts and bolts	Stop work immediately. Replace any damaged or missing tines. Tighten all loose bolts and nuts.

TOW AE 48 PARTS DRAWING



TOW AE 48 PARTS LIST

ITEM NO.	DESCRIPTION	TOW AE Part No.	QTY
1	FRAME TOW AE W/LABELS	361130-S	2
2	LABEL BADGING TOW AE48	361280	2
3	LABEL PRODUCT DECAL SM CIRCLE	890456	2
4	SERVICE WHEEL BRACKET LEFT	361111-S	1
5	SERVICE WHEEL BRACKET RIGHT	361112-S	1
6	SERVICE WHEEL ASSY TOW AE	361276-S	2
7	BRACKET MOUNT TONGUE	361136	1
8	TUBE TONGUE TOW AE	361137	1
9	BRACE TONGUE SHORT	361161	2
10	BRACE TONGUE LONG	361139	1
11	PIN WHEEL TOW AE	361144	2
12	PLATE HITCH TOW AE	361160	2
13	SPACER 3/4" ID X 2.125	361145	2
14	SPACER WHEEL TOW AE	361146	2
15	PIN BENT ARM 5/8" X 3"	811168	1
16	PIN HAIR SPRING 5/8" - 3/4"	811169	1
17	BEARING 3/4" CAST BLOCK	350133	4
18	SPRING WHEEL TOW AE	361169	2
19	LIFT BAR WA TOW AE	361152	1
20	PIN 3/8" X 1 1/2 DETENT	510130	1
21	PIN COTTER 3/16" X 2" ZP	8197033	4
22	RING SNAP EXTERNAL	361150	2
23	SCREWCAP 1/2" - 13 X 5 1/2" HCS ZP	8041109	2
24	WASHER HUB CAP	850237	2
25	NUT LOCK 1/2" - 13 HEX	8160005	3
26	SCREWCAP 1/2-13 X 7" HCS	8041235	1
27	WASHER 1/2" SAE	8172011	2
28	LABEL WARNING	900327	2
29	BOLT CARRIAGE 3/8" - 16 X 1 1/2"HCS	8024060	8
30	SCREWCAP 3/8" - 16 X 3 1/2 HCS	8041060	2
31	NUT LOCK 3/8" - 16 HEX	8160003	71
32	SCREWCAP 3/8" - 16 X 1 1/4" HCS ZP	8041051	5
33	SPACER 1/2" ID X 1.5	361147	2
34	SCREWCAP 3/8" - 16 X 1 1/2" HCS ZP	8041052	6
35	WASHER 3/8" SAE	8172009	38
37	SPACER TINE BEARING	360109	2
38	SHAFT TINE WA TOW AE	361171	2
39	SCREWCAP 3/8" - 16 X 1 1/2" HCS ZP	8041052	16
40	TINE 3/4" CORE HARDENED	360100	48
51	WASHER 1/2" FLAT	900230	4